

Unit: Chemical Equilibrium	
IB Expectations/ Assessment Criteria	
<p>DP Group 4: Chemistry, DP - Age 16-18, Objectives</p> <p>It is the intention of all the Diploma Programme experimental science courses that students achieve the following objectives.</p> <ul style="list-style-type: none"> 1. Demonstrate an understanding of: a. scientific facts and concepts b. scientific methods and techniques c. scientific terminology d. methods of presenting scientific information. 2. Apply and use: a. scientific facts and concepts b. scientific methods and techniques c. scientific terminology to communicate effectively d. appropriate methods to present scientific information. 3. Construct, analyse and evaluate: a. hypotheses, research questions and predictions b. scientific methods and techniques c. scientific explanations. 4. Demonstrate the personal skills of cooperation, perseverance and responsibility appropriate for effective scientific investigation and problem solving. 5. Demonstrate the manipulative skills necessary to carry out scientific investigations with precision and safety. 	
Approach	Significant concept(s) / Considerations
Understanding equilibrium in Nature and then applying the same concept to chemical reactions.	Relating dynamic equilibrium from personal experience to learn chemical equilibrium.
Guiding Questions	Learner Profile
Our chemical industrial production is all about striking the right balance.	<ul style="list-style-type: none"> Knowledgeable Communicators Balanced Reflective

Central Idea / Content	Learning Objectives
<p>7.1 Dynamic equilibrium</p> <p>7.2 The position of equilibrium</p>	<p>Outline the characteristics of chemical and physical systems in a state of equilibrium.</p> <p>Deduce the equilibrium constant expression (K_c) from the equation for a homogeneous reaction.</p> <p>Deduce the extent of a reaction from the magnitude of the equilibrium constant.</p> <p>Apply Le Chatelier's principle to predict the qualitative effects of changes of temperature, pressure and concentration on the position of equilibrium and on the value of the equilibrium constant.</p> <p>State and explain the effect of a catalyst on an equilibrium reaction.</p> <p>Apply the concepts of kinetics and equilibrium to industrial processes.</p>
Assessment	
<p>Worksheets/Assignments</p> <p>Summative: Other Written Assessment</p> <p>Worksheets to assess students' learning on a daily basis.</p> <p>Quizzes and a unit Test</p> <p>Summative: Standardized Test</p> <p>Several quizzes and a unit test will be used to assess students' learning.</p> <p>Lab</p>	

Summative: Lab Assignment		
Group IV projects being done.		
Information Literacy & ICT	International Mindedness	TOK
ICT used by students to do Group IV project. Simulation of available models.	A case study of Fritz Haber. What should be the role of a scientist in our society?	
Strategies / Activities / Differentiation	Resources	
More simulation activities to understand the reaching of the equilibrium.	Chemistry Course Companion Teacher assisted learning materials Independent research work Worksheets	
Unit Reflections		